



DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Docket. No. AD14-14-000]

Price Formation in Energy and Ancillary Services, Markets Operated by Regional Transmission, Organizations and Independent System Operators: Supplemental Notice of Workshop on Price Formation: Scarcity and Shortage Pricing, Offer Mitigation, and Offer Caps in RTO and ISO Markets

As announced in a Notice issued on September 5, 2014, the Federal Energy Regulatory Commission (Commission) will hold a workshop on Tuesday, October 28, 2014 to commence a discussion with industry on scarcity and shortage pricing, offer mitigation, and offer caps in energy and ancillary service markets operated by the Regional Transmission Organizations and Independent System Operators (RTOs/ISOs). The workshop will commence at 8:45 a.m. and conclude at 5 p.m. and will be held at the Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426. This workshop is free of charge and open to the public. Commission members may participate in the workshop.

The agenda and a list of participants for this workshop are attached. Those who plan to attend the workshop are encouraged to complete the registration form located at <https://www.ferc.gov/whats-new/registration/10-28-14-form.aspx>. There is no registration deadline.

The workshop will be transcribed. Transcripts of the workshop will be available for a fee from Ace-Federal Reporters, Inc. (202-347-3700 or 1-800-336-6646). Additionally, there will

be a free webcast of the workshop. The webcast will allow persons to listen to the workshop but not participate. Anyone with Internet access who wants to listen to the workshop can do so by navigating to the Calendar of Events at www.ferc.gov, locating the technical workshop in the Calendar, and clicking on the webcast link. The Capitol Connection provides technical support for the webcast and offers the option of listening to the meeting via phone-bridge for a fee. If you have any questions, visit www.CapitolConnection.org or call 703-993-3100.

While this workshop is not for the purpose of discussing specific cases, the workshop may address matters at issue in the following Commission proceedings that are pending: Astoria Generating Company L.P. v. New York Independent System Operator, Inc., Docket Nos. EL11-42 and EL11-50; California Independent System Operator Corporation, Docket No. ER14-1386 and ER14-2484; Hudson Transmission Partners, LLC v. New York Independent System Operator, Inc., Docket No. EL12-98; Independent Power Producers of New York, Inc. v. New York Independent System Operator, Inc., Docket No. EL13-62; ISO New England, Inc. and New England Power Pool, Docket Nos. EL14-52, ER 14-1050, ER14-2419, and ER14-2929; Midcontinent Independent System Operator, Inc., Docket Nos. ER14-2156, and ER11-4081; PJM Interconnection, L.L.C., Docket Nos. ER14-1144 and ER14-1145; New York Independent System Operator, Inc., Docket No. EL07-39; Old Dominion Electric Cooperative, Docket No. ER14-2242; Seneca Power Partners, L.P. v. New York Independent System Operator, Inc., Docket No. EL12-6; and Southwest Power Pool, Inc., Docket No. ER15-21.

Commission workshops are accessible under section 508 of the Rehabilitation Act of 1973. For accessibility accommodations please send an email to accessibility@ferc.gov or call

toll free (866) 208-3372 (voice) or (202) 502-8659 (TTY), or send a fax to (202) 208-2106 with the requested accommodations.

For more information about the workshop, please contact:

Logistical information

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Dated: October 10, 2014.

Kimberly D. Bose,
Secretary.



Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators

Scarcity and Shortage Pricing, Offer Mitigation, and Offer Caps Workshop

Docket No. AD14-14-000

October 28, 2014

Agenda

On October 28, 2014 a second conference will be held to address matters of price formation in the energy and ancillary services markets administered by the Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs).¹ It will have three areas of focus: scarcity and shortage pricing, offer mitigation and offer caps in the RTO/ISO markets. The RTO/ISO markets rely on security constrained economic dispatch and locational marginal pricing to ensure efficient dispatch of, and compensation to, resources. Ideally, RTO/ISO market designs would rely on competitive pressure to ensure that resource offers reflect marginal cost. Because the markets are imperfect at times (e.g., structural issues, inelastic demand), the RTO/ISO tariffs include specific rules to ensure prices remain just and reasonable. These rules

¹ *Price Formation in Energy and Ancillary Services Markets Operated by Regional Transmission Organizations and Independent System Operators*, Notice of Workshop, Docket No. AD14-14-000 (Sept. 4, 2014).

take the form of market power mitigation, offer caps and scarcity pricing. Working together, these rules are intended to protect against the exercise of market power while allowing prices in the markets to rise in response to predetermined triggers (e.g., an operating reserve deficiency) to elicit a market response (e.g., generator performance, load response) to support the reliable and efficient operation of the market. These rules would ideally reflect the value to load of maintaining reliability and avoiding involuntary load curtailments.

Through this conference and any papers Commission staff may release in advance, Commission staff will explore the technical, operational and market issues related to shortage pricing, offer mitigation, and offer caps.

8:45 a.m. - 9 a.m. Welcome and Opening Remarks

**9 a.m. – 10:30a.m. Panel 1: Goals of Scarcity and Shortage Pricing and
Performance of Existing Pricing Rules**

Generally speaking, shortage pricing is the method RTOs/ISOs employ to price energy and operating reserves during scarcity and shortage conditions. Scarcity and shortage prices are intended to achieve two primary goals. The first goal of scarcity and shortage pricing is to send a short-term price signal to incentivize operation of existing resources to help maintain reliability. In the short term, these prices should be high enough to induce existing resources to be available to the maximum extent possible and to induce imports to offer from neighboring areas. The high prices should also signal consumers to reduce demand.

The second goal of scarcity and shortage pricing is to contribute to efficient long-term economic

entry and exit. When scarcity and shortage prices accurately reflect consumers' valuation of avoidance of an involuntary load curtailment, the resulting energy and ancillary services prices can contribute to efficient long-run market participation (entry and exit) by addressing part of the "missing money" problem.²

While scarcity and shortage pricing rules are designed to achieve these two goals, in practice, system operator practices and experiences may influence how the rules are administered and thus their efficacy.

Panel 1 will explore how the goals of scarcity and shortage pricing are balanced against the operational realities of employing administrative pricing rules. The discussion will also focus on the following:

- How the definition of a scarcity or shortage event and the pricing triggers compare across RTO and ISO markets;
- The frequency and duration of scarcity or shortage events;
- To what extent the frequency and duration of scarcity or shortage events support efficient entry and exit;
- How the actions system operators take to avert a scarcity or shortage event are reflected in energy and ancillary service prices;
- Whether scarcity and shortage pricing rules and import/export timing are sufficiently coordinated such that market participants can schedule exports and imports efficiently to respond to shortage conditions.

² See, e.g., Johannes P. Pfeifenberger and Kathleen Spees, The Brattle Group, and Kevin Carden and Nick Wintermantel, Astrape Consulting, *Resource Adequacy Requirements: Reliability and Economic Implications* at 83-84 (Sept. 2013), available at http://www.brattle.com/system/publications/pdfs/000/004/984/original/Resource_Adequacy_Requirements_Pfeifenberger_Spees_FERC_Sept_2013.pdf?1392303166.

Panelists:

- Matthew White, ISO New England Inc.
- Todd Ramey, Midcontinent Independent System Operator, Inc.
- Robert Pike, New York Independent System Operator, Inc.
- Adam Keech, PJM Interconnection, L.L.C.
- Richard Dillon, Southwest Power Pool, Inc.

10:30a.m. – 10:45a.m. Break

10:45a.m. – 12:30p.m. Panel 2: Lessons Learned from Existing Scarcity and Shortage Pricing Rules

Panel 2 will explore lessons learned from existing scarcity and shortage pricing rules. Possible discussion items could include the topics discussed in Panel 1 in addition to any other concerns panelists may have. The RTOs/ISOs and the RTO/ISO market monitoring units will be given an opportunity to discuss any issues raised by panelists.

Panelists:

- Joseph Cavicchi, Compass Lexecon, speaking on behalf of Electric Power Supply Association
- Erica Bowman, America's Natural Gas Alliance
- John Citrolo, PSEG Power
- Charlie Bayless, North Carolina Electric Membership Corporation
- Joseph Bowring, Monitoring Analytics

12:30p.m. – 1:30p.m. Lunch

1:30p.m. – 3:30p.m. Panel 3: Goals of Offer Caps and Market Power Mitigation

Panel 3 will provide the RTO/ISO Market Monitors an opportunity to discuss the goals of the current incremental energy offer cap and market power mitigation provisions in their respective markets, and to provide a performance assessment with respect to those goals. The market monitors will be asked to discuss the role the \$1,000/MWh offer cap plays in both the mitigation rules and the shortage pricing rules. The market monitors will also be asked to discuss whether:

(1) market power mitigation provisions have a material impact on the price formation process;

(2) the short-run marginal costs estimates that underlie market power mitigation provisions sufficiently account for all resource supply costs, including opportunity costs; (3) RTO/ISO offer rules provide sufficient flexibility for resources to reflect cost changes that occur between day-ahead and real-time and across hours in real-time; and (4) RTO/ISO rules provide sufficient protection against the exercise of market power.

Panelists:

- Eric Hildebrandt, California Independent System Operator Corporation
- Jeffrey McDonald, ISO New England Inc.
- Shaun Johnson, New York Independent System Operator, Inc.
- Joseph Bowring, Monitoring Analytics
- Catherine Mooney, Southwest Power Pool, Inc.
- David Patton, Potomac Economics

3:30p.m. – 3:45p.m. Break

3:45p.m. – 4:45p.m. Panel 4: Impacts of Offer Caps and Market Power Mitigation

Panel 4 will focus on the impacts that offer caps and offer mitigation have on both buyers and sellers in wholesale markets. Discussion will include comments from resource owners about whether the current \$1,000/MWh offer cap permits them to reflect their costs fully in supply bids. Resource owners will also be asked to discuss: (1) whether the RTOs/ISOs permit all of the relevant costs, including opportunity costs, to be included in the marginal cost estimates that underlie market power mitigation provisions; and (2) whether RTO/ISO offer rules permit resources to reflect changes in resource supply costs that occur between day-ahead and real-time and across hours in real-time. Panelists will be asked to comment on the role that offer caps and market power mitigation procedures play in ensuring just and reasonable rates. Of particular interest will be the extent to which offers capped at some value (like the current \$1000/MWh cap) play a meaningful role in consumer protection. The RTOs/ISOs and the RTO/ISO market monitoring units will be given an opportunity to discuss any issues raised by panelists.

Panelists:

- Joseph Cavicchi, Compass Lexecon, speaking on behalf of Electric Power Supply Association
- Abraham Silverman, NRG Energy, Inc.
- Edward Tatum, Old Dominion Electric Cooperative
- Jeffrey Nelson, Southern California Edison
- Charlie Bayless, North Carolina Electric Membership Corporation
- Patrick Connors, WPPI Energy, speaking on behalf of Transmission Access Policy Study Group

4:45p.m. – 5 p.m. Closing

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